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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/727,588   | 12/05/2003  | Teruo Ishishita      | 10517/201           | 7318             |
| 23838  | 7590        | 07/22/2005           | EXAMINER            |                  |
| KENYON & KENYON<br>1500 K STREET NW<br>SUITE 700<br>WASHINGTON, DC 20005 |             |                      | NGUYEN, TUNG X      |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2829                |                  |

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/727,588 | <b>Applicant(s)</b><br>ISHISHITA ET AL.  |  |
|                              | <b>Examiner</b><br>Tung X. Nguyen    | <b>Art Unit</b><br>2829  |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,8,9 and 11 is/are rejected.
- 7) ☒ Claim(s) 3,5-7,10 and 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/06/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4, 8-9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkubo et al. (u.s.p 6,621,250).

As to claims 1, Ohkubo et al. disclose in Fig. 1, an apparatus for calculating an offset value comprising: a determining device (80e of figure 1) for determining whether calculation of offset value (fully-charged state, col. 3, lines 1-5) is permitted based on a current value (display on 40 of figure 1) detected by the current sensor (40 of figure 1); wherein the determining device for determining the calculation of the offset value is permitted when the current value detected by the current sensor is switched from charging to discharging current value.

Ohkubo et al. Still disclose in Fig. 1, a calculating device (80c of figure 1) for calculating the current value detected by the current sensor (40 of figure 1) as the offset value (fully-charged state, col. 3, lines 1-5) when calculation of the offset value is permitted by the determining device (col. 3, lines 5-10).

In regard to the claimed "the current sensor switched from a negative value to a positive value" it is noted that the reference is silent such feature; it would have been obvious to a person having ordinary skill in the art at the time of the present invention to

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recognize that the discharge and charge value are the same meaning with the negative and positive value, as also well-known in the existing battery capacity measuring technology. For example, Oba et al. (JP405199605A) disclose the current sensor has a negative value (discharge state) and positive value (charged state) (see the abstract).

As to claims 2, 4, 9, 11, Ohkubo et al. disclose wherein the absolute value of the current value is within a predetermined range is continued for a predetermined time (col. 3, lines 1-7, and lines 15-20).

***Allowable Subject Matter***

3. Claims 3, 5, 10, 12, 6-7, and 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

As to claims 3, 5, 10, 12, the prior art does not teach or suggest the predetermined range is changed according to a change in a temperature of the current sensor. In combination with the other claimed features.

As to claims 6-7, and 13-14, the prior art does not teach or suggest the determining device for determines whether the current sensor is not being supplied with electric power; wherein the calculating device for calculates the current value detected by the current sensor as the offset value when it is determined that the electric sensor is not being supplied with electric power by the determining device. In combination with the other claimed features.

***Response to Arguments***

5. Applicant's arguments filed 4/29/05 have been fully considered but they are not persuasive.

In re pages 5-6, applicant argues that Ohkubo et al in view of Oba et al do not disclose or suggest for permitting calculation of the offset value at the time of switching between positive and negative current values.

In response, the examiner respectfully disagrees with applicant about the issue for the following reasons: Ohkubo et al disclose an offset value calculated by integrating the current values that are detected during the period from the instant a battery is fully charged (positive state) previously to the instant it is fully charged this time, the battery is discharged (negative state) and charged (positive state) by the same amount of current. The offset value of the detected current values is divided by the length of the period that is an integration period (col. 3, lines 12-30). Therefore, Ohkubo et al disclose permitting the calculation of the offset value at the time of switching between positive and negative current values.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X. Nguyen whose telephone number is (571) 272-1967. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (571) 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN  
7/18/05

  
**VINH NGUYEN**  
**PRIMARY EXAMINER**  
A.U. 2829  
07/20/05